

In the claims:

Please substitute the following claims 1 and 11 for the like-numbered claim as previously amended on December 3, 2002. A marked up copy of these claims showing the current changes is attached as an appendix to this amendment.

1. (Thrice amended) A method of depositing a film containing silicon on a crystalline silicon surface, said method including steps of

C3 introducing a gas containing precursor material into a reaction vessel, a constituent material of said precursor material producing evolution of a distinctive amount of hydrogen relative to mass flow rate upon deposition alone or in combination with another constituent material of said precursor material,

adsorbing an activated species formed from said precursor material on said crystalline silicon surface, and

determining a partial pressure of hydrogen in residual gases as said activated species is deposited on said crystalline silicon surface,

controlling in real time at least one of temperature and mass flow of said precursor material in said reactor vessel in response to said partial pressure of hydrogen.

11. (Thrice Amended) Apparatus for depositing a film containing silicon on a crystalline silicon surface including

C4 means for introducing a gas containing precursor material into a reaction vessel such that an activated species formed from said precursor material is adsorbed on said crystalline silicon surface, a constituent material of said precursor material producing evolution of a distinctive amount of hydrogen relative to mass flow rate upon deposition alone or in combination with

another constituent material of said precursor material, and

means for determining a partial pressure of hydrogen in residual gases as said activated species is deposited on said crystalline silicon surface,

means for controlling in real time at least one of temperature and mass flow of said precursor material in said reactor vessel in response to said partial pressure of hydrogen.

REMARKS

Claims 1, 3 - 11 and 13 - 20 remain active in this application. Claims 2 and 12 have previously been canceled. The specification has been reviewed and editorial revisions made where seen to be appropriate. Claims 1 and 11 have been amended. Support for the amendments of the claims is found throughout the application, especially in Figures 1 - 3 and the description thereof on pages 8 - 11 and on page 11, line 4 - 20, in particular. No new matter has been introduced into the application.

Claims 1, 3 - 11 and 13 - 20 have been rejected under 35 U.S.C. §112, first paragraph: the Examiner indicating a lack of support for flow of more than two gases. This ground of rejection is respectfully traversed.

While the invention has been disclosed principally in connection with deposition of silicon or an SiGe from silane and/or silane and germane precursors, the basic principles of the invention are, in theory, not limited to such materials or operation in the absence of or to the exclusion of all other materials including trace gases and the like. All that is necessary for the successful practice of the invention is that the constituent material or materials of the precursor material produce evolution of different and distinctive